

Ranger Rick's nature magazine

PUBLISHED BY
THE NATIONAL WILDLIFE FEDERATION



July 1979

Volume 13, Number 7

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Cover credits:

Anhinga preening by Stephen J. Krasemann;
Land Iguana by Leonard Lee Rue, III



RANGER RICK'S PLEDGE

*I give my pledge as a member of
Ranger Rick's Nature Club*

*To use my eyes to see the beauty
of all outdoors.*

*To train my mind to learn the
importance of nature.*

*To use my hands to help protect our
soil, water, woods and wildlife.*

*And, by my good example, to show
others how to respect, properly use
and enjoy our natural resources.*

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Ranger Rick's Nature Magazine (ISSN 0033-9229) is published monthly by the National Wildlife Federation, a non-profit corporation, 8925 Leesburg Pike, Vienna, VA 22180. It is a publication available only to members of Ranger Rick's Nature Club and not sold on a subscription basis. Membership annual dues \$8.00, Foreign \$10.00. Second class postage paid at Vienna, VA, and at additional mailing offices. Copyright © 1979 by the National Wildlife Federation. All rights reserved. Printed by Holladay-Tyler printing corp., Rockville, MD 20852. Ranger Rick's Nature Magazine is reproduced on "Talking Books" by the Library of Congress and distributed free by regional libraries in the U.S.

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General Correspondence about wildlife stamps, nature merchandise, the National Wildlife Book Service, contributions, "Ranger Rick's Activity Guide" for teachers and club leaders, and general conservation matters: National Wildlife Federation, 1412 16th Street NW, Washington, DC 20036. **Membership, Change of Address and Magazine Delivery** send to: National Wildlife Federation, 1412 16th Street NW, Washington, DC 20036. Allow six weeks for change of address. Send both old and new addresses.

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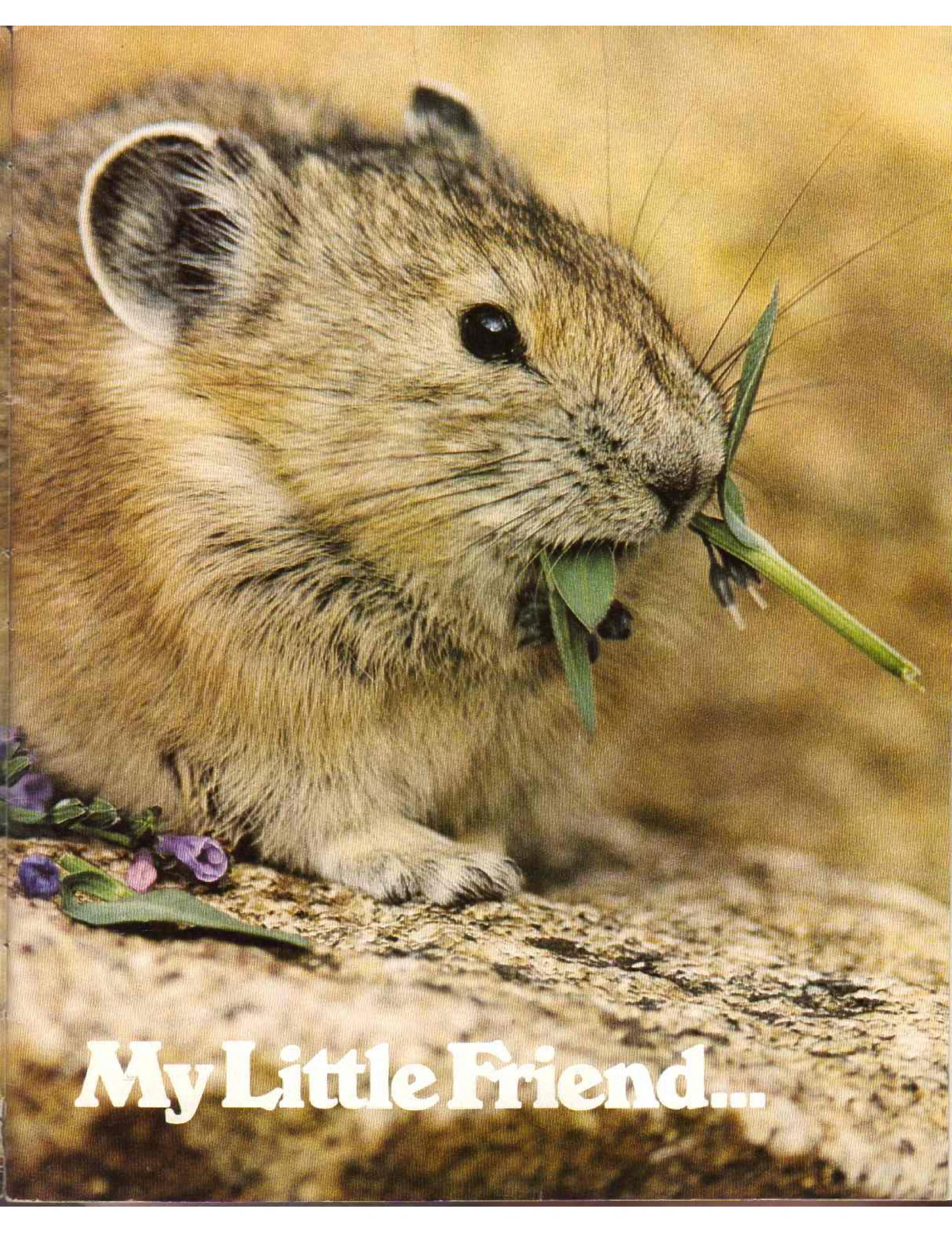
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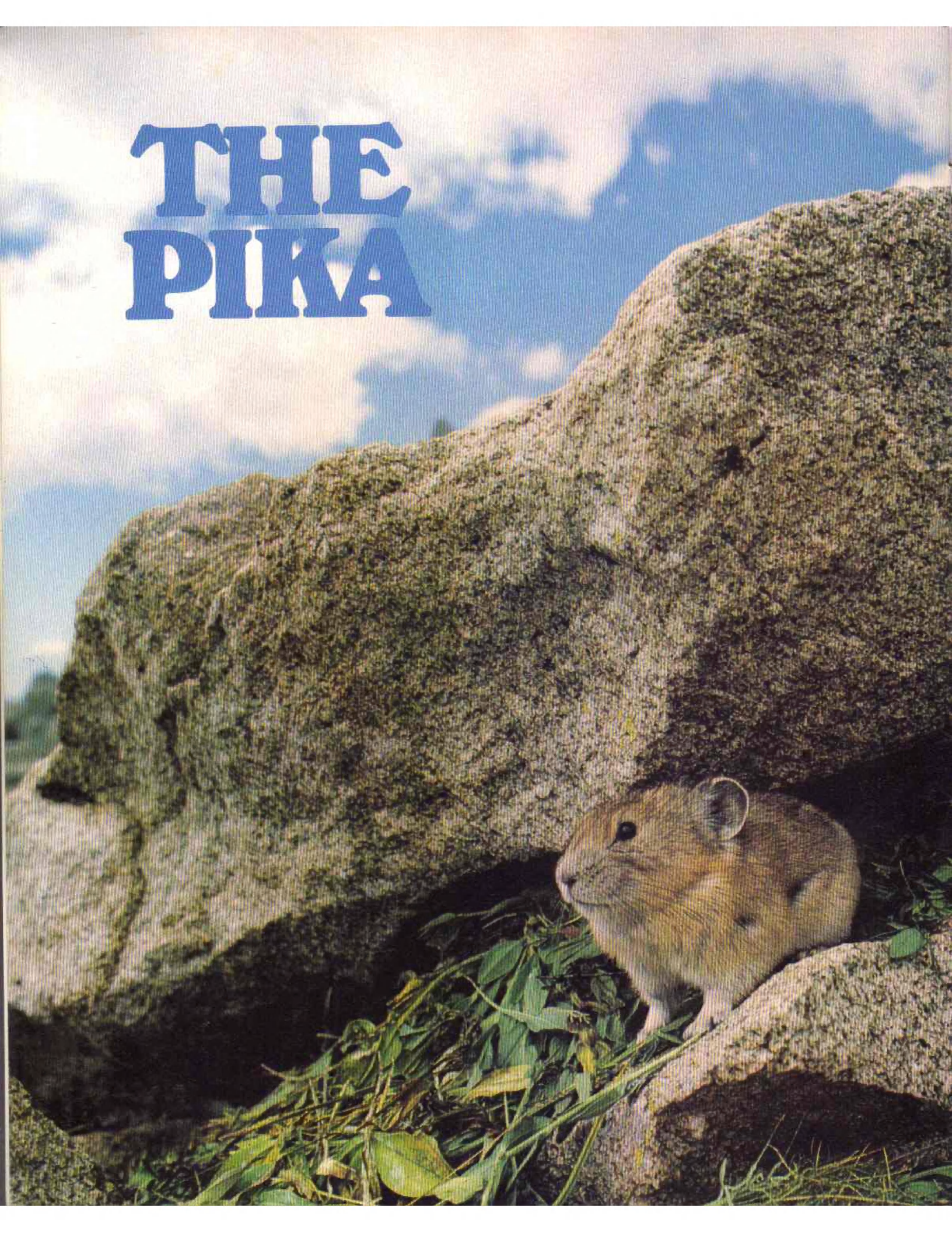
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My Little Friend...

THE PIKA





by Lee Stowell Cullen

It had been a long climb up the mountain. I was tired, so it was easy to sit quite still. I had heard a little pika (PIE-kuh) whistle as I neared the timberline rockpile. But when I looked where I thought the sound had come from, I saw nothing! Another whistle — still nothing. I waited, sitting very still.

Then right in front of me a small gray-brown animal appeared — a pika. It looked around, then dashed along a narrow pathway it had made to the mountain meadow. In no time it was back, its mouth filled with grass, herbs and wildflowers. Quickly the pika spread the plants it had gathered on a rock. Then back to the meadow it went. Again and again the little animal filled its mouth with plants and returned to lay them out to dry in the warm air.

The pika was, I knew, making hay. "Hay?" you ask. "Hay," I say. Since pikas don't hibernate, they make hay to eat when snow covers their western mountain homes.

Suddenly the pika I had been watching gave another shrill whistle. Other pikas answered. Quick as a wink my little friend disappeared into a crack between the rocks. Perhaps it had seen a weasel or a hawk soaring overhead looking for a meal. The whistle had warned other pikas in the colony that danger was near.

I waited a while longer. Then out popped the pika and headed straight for the meadow. Soon it brought back more plants. At the rate the pika was going it would have three or four bushels of hay by winter. And that's a lot of hay for an animal about the size of a guinea pig! *The End*

Photos by Jeff Foot (3/5)

by Jeff Mathewson
and his dad, Worth Mathewson

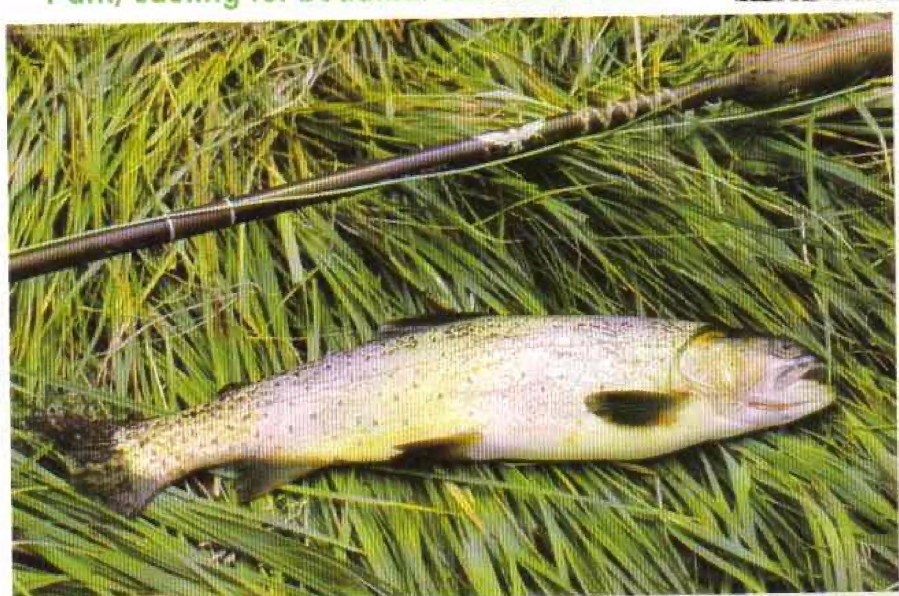
My dad and I go fishing as often as we can. We like to use a fly rod and fake flies to catch trout.

When I was younger, I couldn't understand why some days we would keep the trout we caught and take them home to eat. Other times we would go to a different stream and carefully set free all the trout we had caught. My dad explained that we didn't want to kill any *native* trout — there just aren't enough of them.

Dad said that at one time all the trout in North America were natives. They lived in the lakes, creeks and rivers where

Fishing for FUN

What great fishing in Yellowstone National Park, casting for beautiful cutthroat trout!



Photos by Worth Mathewson





their kind always had lived. There were many kinds of natives. But the most common were the rainbow trout in the West and the brook trout in the East.

Then about a hundred years ago people started raising trout in hatcheries. Rainbow trout raised in hatcheries were shipped to eastern streams, where there had never been rainbows before. Brook trout were shipped to the western states. Brown trout were shipped all the way across the Atlantic Ocean from Germany and Scotland.

It didn't take long for the different kinds to spread all over North America, wherever there was clean, cold water. Things became very mixed up. There were all kinds of trout everywhere. And new kinds often took over the water where natives once lived.

All kinds of trout are fun to catch. But to my dad and me, native trout are the best. We like the feeling of catching the kinds of fish that have always lived there. It seems to take us back in time, to the way fishing used to be.

One of the best places to find native trout is Yellowstone National Park. There are many different kinds of trout in the park — rainbow, brown, brook and lake trout. But there is only one kind that has always been there — the native Yellowstone cutthroat trout.

Last summer Dad and I went to Yellowstone to see the wildlife there as well as Old Faithful Geyser. But we especially wanted to catch some of those native cutthroats!

We decided that we would fish in the part of the park where you must let go all the fish you catch. This rule protects the native trout so well that here the fish are much bigger and much more plentiful. We talked to the ranger at the park office,

Please turn the page

and she told us exactly where to go.

When we got to the river many people were fishing. We decided to watch for a while. Soon we saw that the trout were feeding on a small brown insect called a caddisfly. There were lots of caddisflies flying over the river and landing on the surface.

We looked in Dad's fly box and found a tiny fake fly that looked a lot like the live caddisflies. The fishing fly was made of feathers and fur. These were tied on a hook that had no barb. That made taking it from a fish's mouth easy and harmless.

Dad tied the fly on the line and we waded into the river. Trout were every-

After taking pictures, we carefully let the fish go free. Next time they'll be even bigger.



where! I pointed to some that were coming to the top of the water, almost at our feet.

Dad cast the fly, and we watched it settle on the water. It floated only a few feet in the current when a trout came up fast and struck the fly with a little splash. I grabbed the rod and the fish really started to fight! I quickly waded to shallow water and tried to reel the fish in. But it didn't want to come!

Finally the trout grew tired. I was able to bring it almost to our feet. It was big, about 18 inches (45 cm) long. We both thought that it was one of the prettiest trout that we had ever seen. It had a rich yellow color on its belly and ink-black spots on its sides. We could see the two bright red lines under the trout's throat. That's the reason it's called a cutthroat.

I knew how to let the trout go without hurting it. I wet my hands and carefully picked the tired fish up for some pictures. Then I quickly removed the hook from the trout's mouth. But I didn't throw the fish back into the water. Instead, I slowly lowered the cutthroat into the water and held it while it got its strength back. We could see the fish's gill covers moving in and out slowly. In a little while I was sure that the trout could swim by itself. If I had let it go too soon, it might have been too weak to swim in the current. It might have died.

I took my hands away slowly, and the trout swam upstream a few feet. Then with a sudden dash it swam like a blur to the middle of the river. "Wow!" I said with a big smile.

We caught about twenty of the native Yellowstone cutthroats that afternoon. And we put them all back in the river — for you and your family to catch and look at someday!

The End

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8B



A CHILD LEARNS ABOUT NATURE WITH A GIFT OF RANGER RICK'S NATURE MAGAZINE

The National Wildlife Federation's children's program, Ranger Rick's Nature Club, is an entertaining educator for children, ages 5 through 12. It's a special kind of club that introduces young people to nature through an award-winning publication, RANGER RICK'S NATURE MAGAZINE.

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A TEACHER'S HELPER

RANGER RICK is highly praised in academic circles, and many educators use it to supplement their classroom curriculum. Not only are the facts scientifically authentic and expertly explained, but the magnificent, colorful, close-up photography of animals, plants and people on adventures will amaze child, parent and teacher, alike. The stories promote interest in conservation and nature studies; the games and puzzles encourage mind-expansion; and the simple, charming craft projects are geared to a child's creative thinking.

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THE MAGIC BUFFALO

by Ellen Laycock

White Buffalo was born long ago on a warm sunny day in late April. The plains were covered with blue and white flowers and the grass was green everywhere. It was long before the settlers came.

The new buffalo calf tried to stand up, but he wobbled and fell back to the ground. For a short while he lay there. Then his mother nudged him and he tried again. This time he stayed up. He swayed back and forth, and

then took his first steps. His mother led him back to the herd.

Around him other new buffalo calves stayed close beside their mothers. Sometimes, though, they darted and dashed about as if they were being chased by a coyote.

All the calves had soft orange coats. But not White Buffalo — his fur was almost white. And some Plains Indians said the coat of the white buffalo held magic powers.

Please turn the page



That first summer was a special time for White Buffalo. He did not stray far from his big, dark-furred mother. He drank her milk and grew strong.

Living near the buffalo herd were many other kinds of animals. Swift-footed pronghorns picked their way over the grasslands. Meadowlarks sang flutelike songs from the tops of rocks. Thousands of prairie dogs stood up outside their burrows and barked. They chattered and ducked out of sight when a coyote or an eagle came into view.

There were also insects.—millions of them. Butterflies flashed among the prairie flowers. Grasshoppers made giant leaps from beneath the heavy feet of the buffaloes.

Ticks, fleas and other pests lived in the buffaloes' fur. These pests, along with shedding hair, often made the buffaloes itch. When White Buffalo's mother found a dusty place, she would lie down right in the middle of it. Then she would twist and kick and roll until a dust storm rose around her. She was taking a dust bath, or *wallowing*. On rainy days she often lay down and rolled in the sticky mud of the buffalo wallows. When she stood up she was plastered with brown mud

that slowly dried on her body. The mud and dust smothered some of the pests that had made her itch. The mud was also a shield against the bites of other insects. White Buffalo learned to roll in the buffalo wallows too.

Time passed. The autumn days grew shorter and the grass turned brown. The buffaloes were getting fat and growing long coats for the winter. White Buffalo was now more than half as tall as his mother.

On one of those fine autumn days he saw people for the first time. His herd was wandering slowly across the plain, eating grass as they moved. Buffaloes have a keen sense of smell and good hearing, but they do not see well. None of them saw the men hiding among the rocks. And the wind was blowing the humans' smell away from the herd.

Suddenly an arrow struck the side of the cow buffalo ahead of White Buffalo's mother. The cow began running as fast as she could. Now the hunters stood up and began shooting their arrows at other running buffaloes.

White Buffalo ran faster than he had ever run before. The hunters, without horses,



Drawings by Ted Lewin

watched the buffaloes escape. Only the cow that was surprised by the first arrow was killed. She would become fresh meat for the hunters' families. Her hide would be made into clothing or bedding. Or it would help to cover a tepee, or become the top of a drum for dances or a shield to stop the arrows of enemies. The cow's bones would become weapons and tools, and her hooves would make glue. Almost every part would be used.

After this hunt the Indians were greatly excited. They talked rapidly among themselves. They had seen the big white calf that ran with the speed of the wind. Many times during the long winter the hunters told how they had seen White Buffalo.

Spring flowers bloomed again. Soft winds swept over the land, and the grass was once more tender and sweet.

By his second autumn White Buffalo was nearly full grown. But he would still stay with his mother for two more years.

The hunters came again that autumn, this time on horses. The sound of buffalo hooves was like thunder, and dust rose in a thick

brown cloud around the dashing herd.

At the front of the herd White Buffalo ran like a ghost. The hunters were chasing only him. He ran with head down and tail flying, but the horses were too fast. The hunters were catching up. At the last moment part of the herd moved between White Buffalo and the Indians. Soon the hunters could no longer see White Buffalo in the cloud of dust. This time he was safe.

As long as he lived White Buffalo would have to flee from the Indians. They would come because he wore a magic white coat that every hunter wanted. But he had become the fastest, strongest, smartest buffalo in the herd. It would take a very wise and crafty hunter to kill White Buffalo. *The End*

Rangers: White Buffalo was an albino (al-BY-no), and albino animals are very rare (see *Ranger Rick*, May 1978). Some tribes of Plains Indians thought that a white buffalo was the sacred property of the sun. When they killed one, they took only the hide and the tongue, which they offered to their sun god.

Medicine men sometimes used white buffalo hides to try to cure sickness. Indian chiefs also carried a white buffalo hide into battle. They thought it would protect them from harm.

R.R.



Dear Ranger Rick:

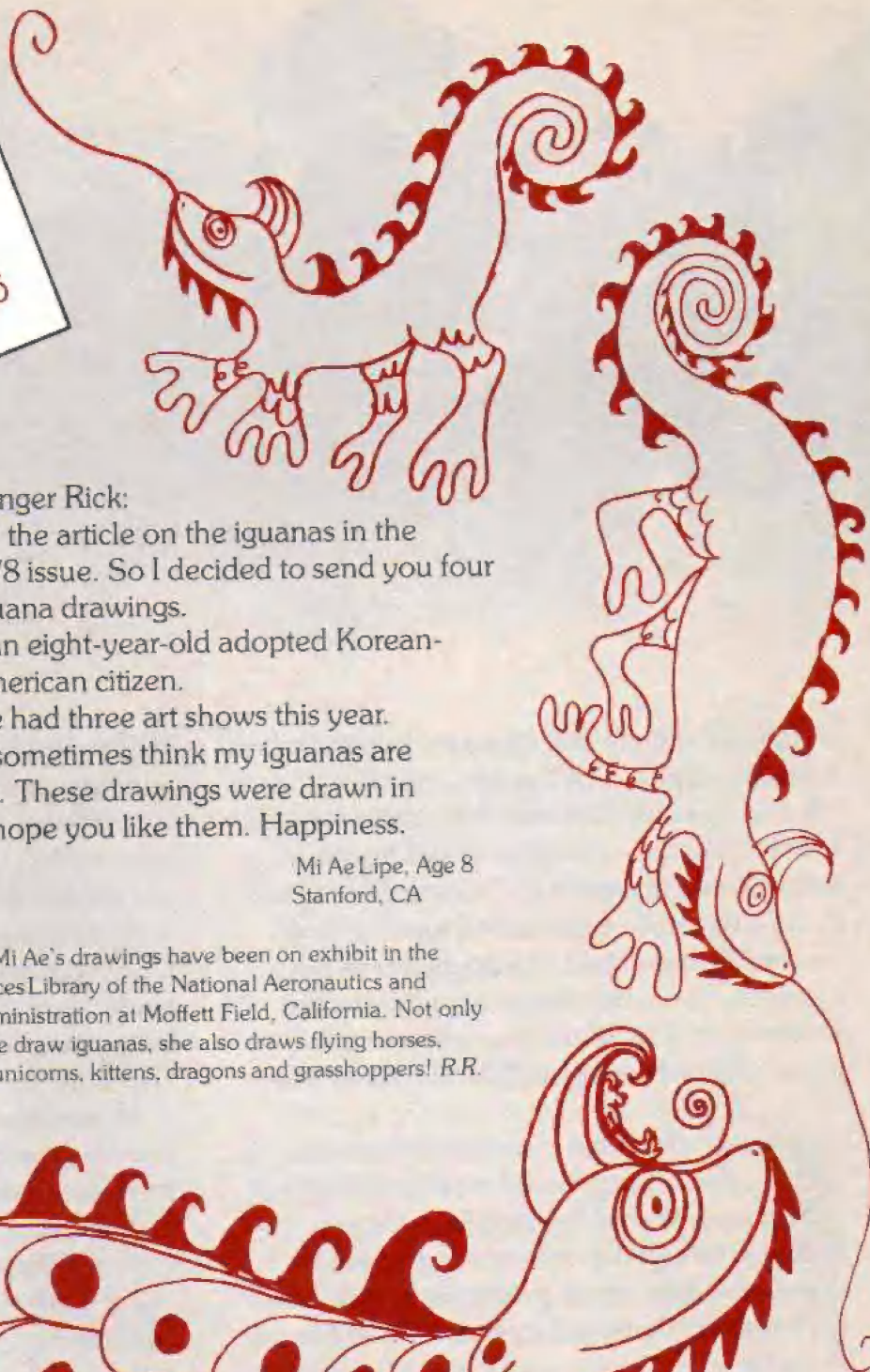
I liked the article on the iguanas in the May 1978 issue. So I decided to send you four small iguana drawings.

I am an eight-year-old adopted Korean-born American citizen.

I have had three art shows this year. People sometimes think my iguanas are dragons. These drawings were drawn in 1978. I hope you like them. Happiness.

Mi Ae Lipe, Age 8
Stanford, CA

Rangers: Mi Ae's drawings have been on exhibit in the Life Sciences Library of the National Aeronautics and Space Administration at Moffett Field, California. Not only does Mi Ae draw iguanas, she also draws flying horses, frogs and unicorns, kittens, dragons and grasshoppers! R.R.



How The Marsh-Mallow Got Its Name

by Mark Warner

Would you ever guess that marshmallows were once made from the roots of plants? Well, they were. That's how they got their name.

Plants named marshmallows grow wild along the coasts and marshes of Europe and Great Britain. They are related to the hollyhocks you might have growing in your flower garden. Marshmallows are tall plants with soft, velvety, gray-green leaves. They bloom each year in late summer. The flowers are pale lavender or pink and about an inch (2.5 cm) across.

When settlers came to America, seeds of the marshmallow plants came with them by chance. Today marshmallows can sometimes



Drawing by Bethann Thornburgh

be found growing wild along the east coast, from Virginia to New England.

Long ago, people dug up marshmallows to get the long, parsnip-like roots. When people mashed and boiled the roots, an interesting thing happened — the mixture became very thick and slippery. People used this syrup as a medicine for sore throats and coughs, and as an ointment for burns and sores.

Not only was marshmallow-root medicine soothing, it also tasted good. It wasn't long before someone added sugar to the marshmallow-root

syrup and allowed it to thicken even more. This new treat was called, naturally, *marshmallow candy*.

The marshmallows you buy in a store today are no longer made from marshmallow roots. Instead they are made of corn syrup, sugar and gelatin. But the name remains.

The next time you float marshmallows in a cup of hot chocolate or roast them over a campfire, ask your friends how they think the candy got its name. Do you think anyone will guess that the name came from a wildflower, the marshmallow? *The End*

OLLIE OTTER'S FUN PAGES

FUNNY FOOTSIES

Q. Why isn't a monkey's nose twelve inches long? **A.** Because if it were it would be a foot.

Q. Why don't elephants make good dancers? **A.** Because they have two left feet.

Q. What animal hates cold feet the most? **A.** A mother kangaroo.

Q. What hurts more than a giraffe with a sore throat? **A.** A centipede with sore feet.

Q. What kind of cat has no feet? **A.** A catfish.

First person: Why don't you shoo the flies? **Second person:** They like to go barefoot.

Q. What do you make when you put two banana peels together? **A.** A pair of slippers.

Q. If an athlete gets athlete's foot, what does an astronaut get? **A.** Missile toe.

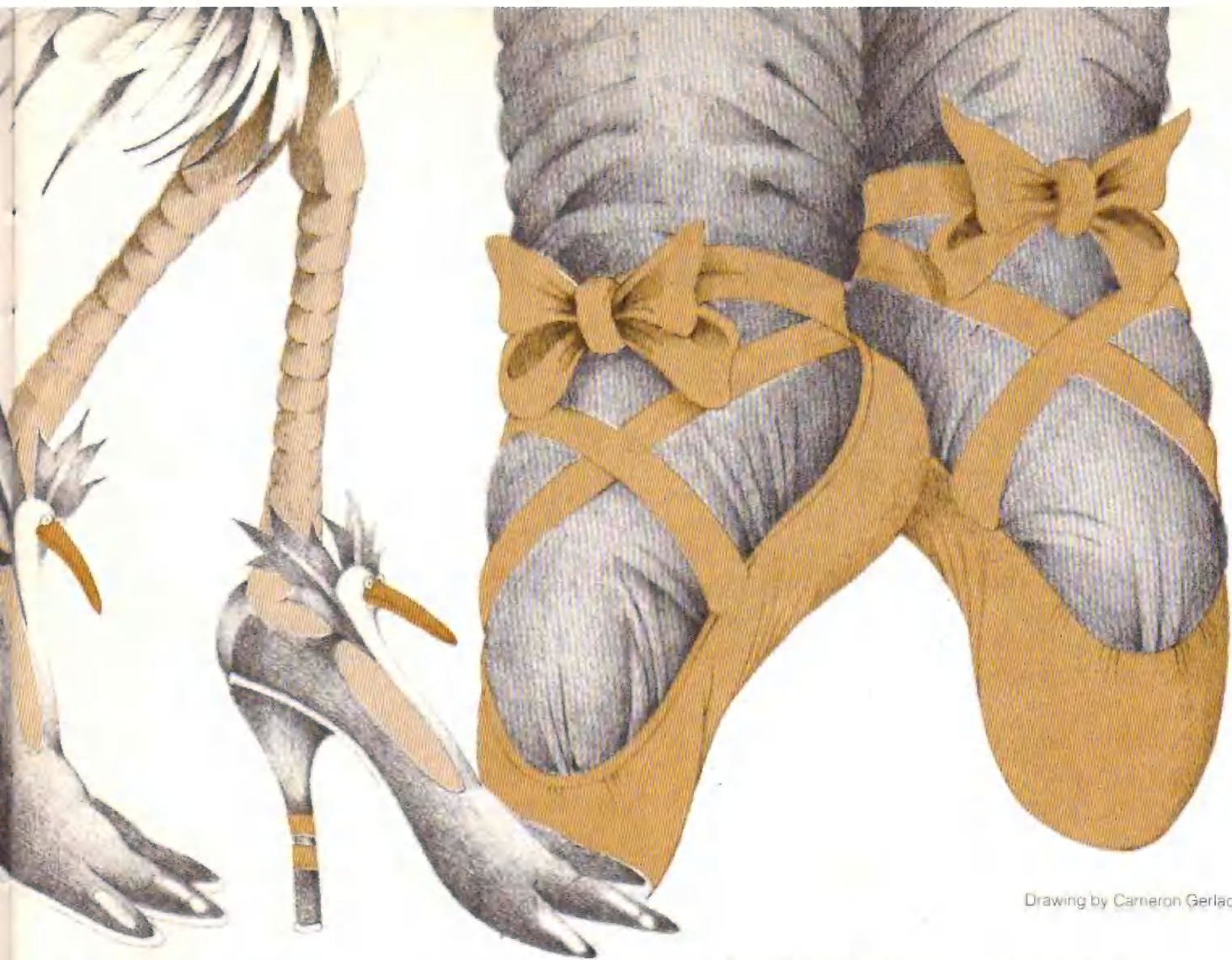


HOOVES, PAWS, FLIPPERS

by Peter Hamilton Kent

Some of the animals listed below have hooves, some have paws and others have flippers. Do you know which animal has which? Write H (hooves), P (paws) or F (Flippers) in the boxes. *Answers are on page 37.*

<input type="checkbox"/> Sea Lion	<input type="checkbox"/> Whale
<input type="checkbox"/> Reindeer	<input type="checkbox"/> Lion
<input type="checkbox"/> Dolphin	<input type="checkbox"/> Giraffe
<input type="checkbox"/> Mole	<input type="checkbox"/> Bear
<input type="checkbox"/> Kangaroo	<input type="checkbox"/> Seal
<input type="checkbox"/> Zebra	<input type="checkbox"/> Antelope
<input type="checkbox"/> Walrus	<input type="checkbox"/> Opossum



Drawing by Cameron Gerlach

FUN ON FOOT

by Roberta L. Fairall

Can you unscramble the animal's name in each of these riddles? Here are some big hints:

Each animal belongs to a group of animals with the same kind of feet or limbs (arms and legs).

Scientists have given these groups very fancy names. The "pod" and "ped" parts of the group names come from Greek and Latin words for feet. For example, walruses and seals are PINNIPEDS (PIN-eh-peds) — animals that have "fin feet."

The unscrambled name will rhyme with the last word of the clue.

Clue: If I were a PINNIPED (fin foot), I wouldn't walk a great *deal*. I could be a LEAS. *Answer:* S E A L

Good luck with these four riddles.

1. If I were a GASTROPOD (GAS-truh-pod) (stomach foot), I might creep but I probably wouldn't sail. I could be a NAILS. _____
2. If I were an ARTHROPOD (AR-thruh-pod) (jointed limbs), it would be easy for me to grab. I could be a RACB. _____
3. If I were a CEPHALOPOD (SEFF-uh-low-pod) ("arms" toward my head), I'd be a slippery kid. I could be a SIDUG. _____
4. If I were a MYRIOPOD (MEER-ih-uh-pod) (many feet), I'd hate to be knock-kneed. I could be a TIPCENEDE. _____

Answers on page 37.

Ranger Rick and his friends

by Lee Stowell Cullen

Becky Hare hopped along the dry, hard ground humming to herself. "You know, Rick," she said, "it's going to be fun to meet my cousins. I've never even seen a jackrabbit. Do you think they'll look like me?"

Odora Skunk laughed. "I hope *not*, Becky!" she joked.

"Some friend!" said Becky, smiling.

"They do look something like you, Becky," said Rick, "but their ears are much bigger and their hind legs are longer than yours. They can really jump."

"They don't have great big feet either," added Odie.

"O.K., Odie, quit teasing," said Rick.

"Never mind, Rick," said Becky. "I'm used to Odie's wisecracks. But speaking of my cousins, I'm glad I don't live in the desert. Southern Arizona is awfully hot."

"You mind the heat more than your cousins do, Becky," said Rick. "Their big ears give off body heat and help them keep cool."

"You bet they do!" shouted a voice near a clump of yucca.

Suddenly a large hare landed right in front of Odie. "Good grief!" she cried. "What kind of thing are you?"

"I am *not* a 'thing,'" the hare said. "I'm a jackrabbit."

"A cousin, a cousin!" shouted Becky. "I'm Becky Hare," she said, "and this is Odora Skunk and Ranger Rick. We were out this way visiting the tule elk and decided to come to see you before we head home to Deep Green Wood. Boy, you can really jump, can't you?"

"Nice to meet you, Becky. I'm Jenny Jackrabbit, and I hope your friend Odie is through making wisecracks! I heard what she said about your big feet."

"I was only teasing," said Odora. "And now I'm really hot and thirsty! What do you do for water around here?"

"I munch on cactus plants," said Jenny, with a grin. "Jackrabbits don't need much water, so the moisture in a cactus is just fine. You can try it if you want."

"Well, O.K." said Odora bravely. "But what about the prickles?"

Drawings by Lorin Thompson



"I just nibble around them until I can pull out a piece, prickles and all. Then I eat the juicy pulp inside. It's easy . . . if you know how," said Jenny.

The four friends hopped over to a stand of prickly pear cacti and settled down in the shade.

"Come on, Odie, try some," said Jenny.

Odie looked at the sharp spines. She thought she could bite into the cactus without touching them. She was wrong. Before she could take a bite, her paw slipped and a spine stabbed her nose.

"Ouch!" she cried, jumping back. "That hurts! Guess you'll have to get a piece for me, Jenny. I'm no jackrabbit . . . that's for sure!"

As the friends watched Jenny work they heard a distant rumbling noise.

"Thunder?" asked Becky. "Is there a storm coming?"

"Sounds more like a truck to me," said Jenny. "Wonder what it's doing way out here?"

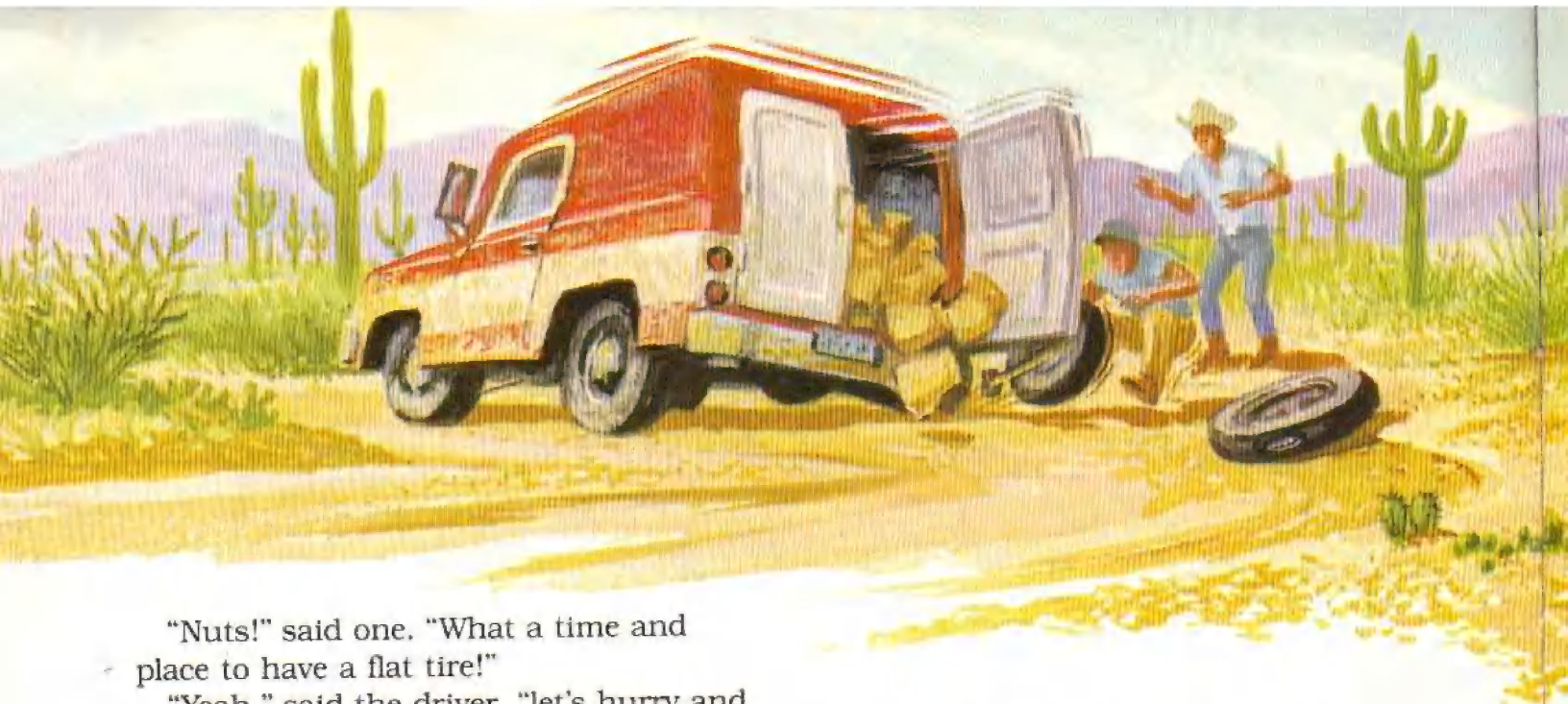
"Hey," yelled Odie. "I see it. It's coming this way!"

"Quick, everyone. Hide under that mesquite (meh-SKEET) bush! Hurry!" ordered Jenny.

No sooner had the animals reached the safety of the bush, than they saw a small truck racing across the desert. It bounced and shook wildly as it tore along. Suddenly, when it was very near Rick and the others, there was a loud *bang!* The truck's brakes squealed, and it jerked to a stop. Two men jumped out and ran to the back of the truck.

Please turn the page





"Nuts!" said one. "What a time and place to have a flat tire!"

"Yeah," said the driver, "let's hurry and get it fixed. We can't waste any time if we're going to get this load to where the money is."

The men quickly began to jack up the rear of the truck. Soon they had the flat tire off. Just as they were about to put the spare tire on, the jack slipped and the truck dropped with a crash. One of the back doors flew open and several paper bags rolled out, landing on the ground. Something in one of the bags moved slightly and made a small, strange sound.

"Get those birds back inside!" yelled the driver. "We're not safe yet."

"Birds!" exclaimed Rick. "They're smuggling wild birds across the Mexican border. We've got to do something!"

"I'll take care of them!" cried Odie. "Don't you worry."

But before Odie could sneak under the truck and get ready to spray the men, the sound of sirens split the air.

"Wildlife agents!" one of the men shouted. "We're done for. Run! Find some place to hide!"

When the special agents saw the men running across the desert, they took off after them. Rick and his friends climbed

quickly into the back of the truck. It was piled with paper bags. They were even stuffed between the panels and the doors! Rick tore one open. So did the other animals. Each bag held a sorry-looking bird. Their beaks had been taped shut and they hardly moved.

"Parrots!" exclaimed Jenny. "All these beautiful parrots. What's the matter with them, Rick?"

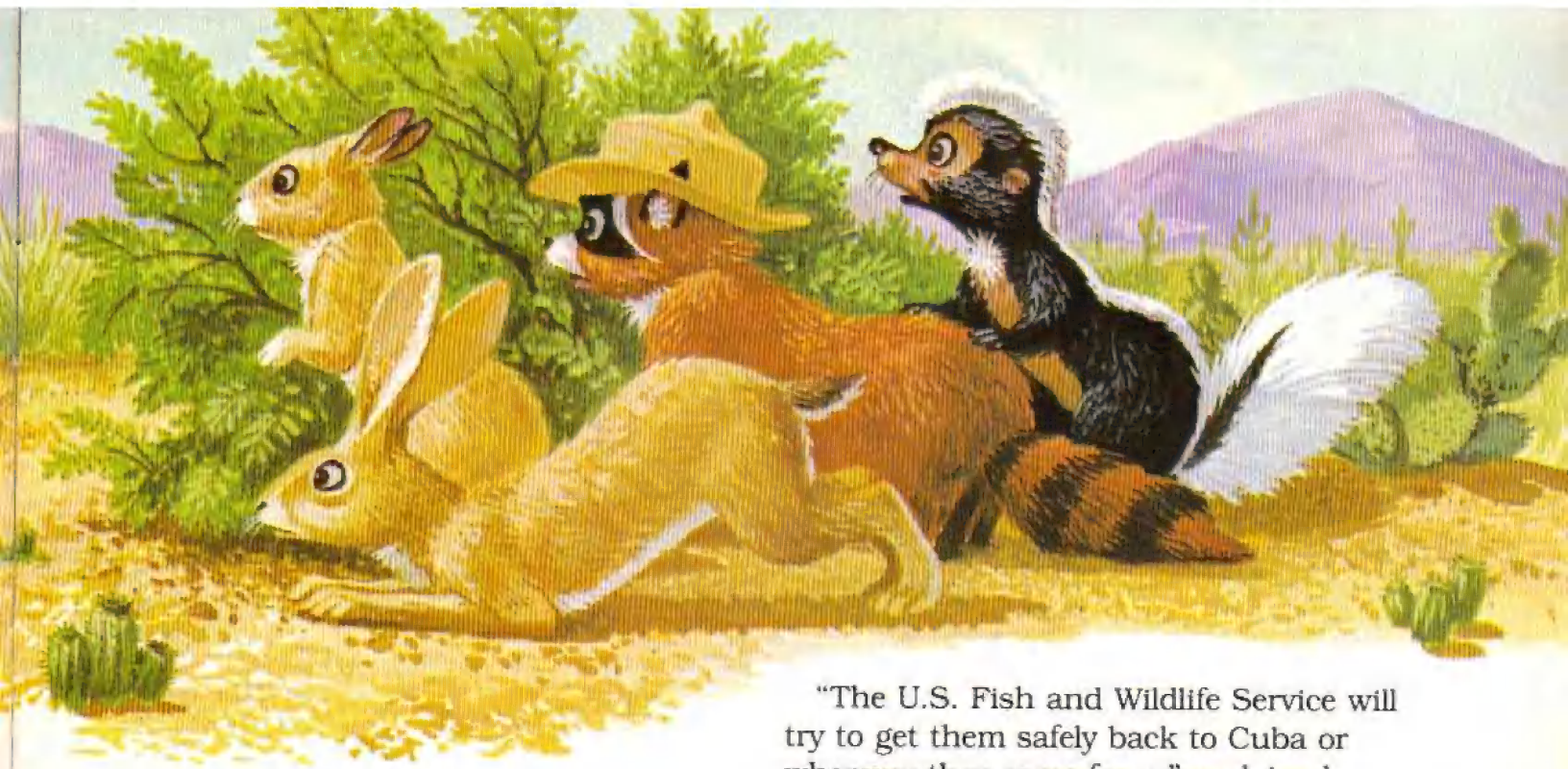
"Drugged!" said Rick angrily. "And I'll bet some of them are dead!"

"But, Rick," said Odie, "I don't understand. What were those men going to do with these birds?"

"They were going to sell them to pet dealers in the United States! What's worse, these birds are Cuban, or Bahamas, parrots. They live on only a few islands of the West Indies and they are endangered! That makes it against the law to capture, keep or sell them!"

Jenny was confused. "But if they're Cuban parrots, how did they get into Mexico?"

"They were probably smuggled in by boat or plane," said Rick. "Once the smugglers get into Mexico, they try to sneak the birds across the border to the



United States. Soon they show up in pet stores all over the country."

"Why do pet dealers sell them if they're endangered?" asked Odie.

"Most of the dealers probably don't know the birds are on the endangered species list and don't bother to check. Birds like these parrots are very popular in the United States. The dealers know they'll sell. That is, the ones that survive."

"The ones that survive!" exclaimed Jenny. "What do you mean?"

"You can see how these birds have been treated!" said Rick. "I'll bet a lot of parrots were killed in the forest as people tried to catch them. Smugglers don't care. They catch as many as they can and hope some of them live long enough to be sold. . . ."

"I think it's horrible!" said Becky. "I hope they catch those men and put them in jail!"

"They'll be punished, Becky. Don't worry about that!" said Rick.

"But what will happen to these birds now?" asked Jenny.

"The U.S. Fish and Wildlife Service will try to get them safely back to Cuba or wherever they came from," explained Rick. "If that's impossible, the birds will be taken to places in this country where they can be cared for properly."

"But, Rick," interrupted Odie. "What can our Rangers do when they see animals like these in pet stores?"

"*Don't buy them!*" exclaimed Rick. "People should buy only animals that have been *raised* as pets, not captured from the wild."

"You mean like cats and dogs and parakeets?" asked Jenny.

"Canaries too?" piped up Becky.

"What about lovebirds?" added Odie.

"Yes, all of them," said Rick. "They all make fine pets. But wild animals, whether they're endangered or not, belong in the wild. They don't belong in cages in people's houses."

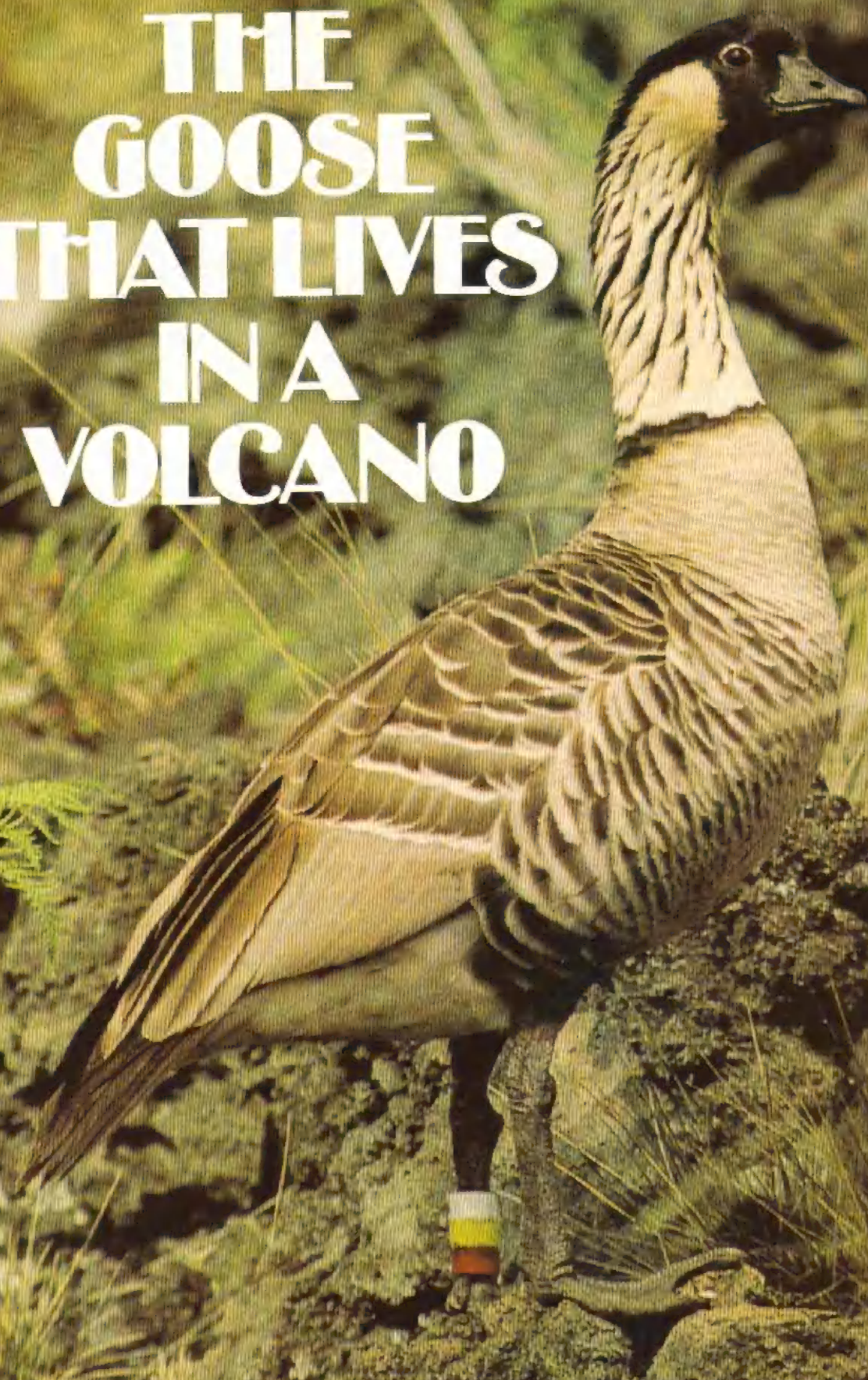
"Quick!" shouted Becky, looking out of the truck. "The agents are coming back. They have the men! Let's get out of here!"

"At least we know some of these birds are going to be all right now," said Odie.

"You said it, Odie," said Rick. "And maybe someday we can say that about all of them."

The End

THE GOOSE THAT LIVES IN A VOLCANO



by Emily W. Hallin

Thousands of years ago a flock of geese came to live on a volcano in Hawaii. No one really knows how they got there. Probably they were a flock of Canada geese that got lost while they were migrating. A bad storm probably blew the geese way off course. They scattered, and a few landed on Haleakela (ha-lee-ah-KAH-lah), a volcano on the island of Maui (MAU-ee).

A volcano is a very hard place for geese to live. The ground is covered with sharp lava rocks. There is a chance that the volcano will erupt, spilling hot lava, gases and ashes. But the geese stayed on at Haleakela — perhaps because they liked the grasses, berries, leaves and flowers growing on the slopes of the volcano. Over the centuries they became a very special kind of geese, the *nene* (nay-nay).

Why did the offspring of the Canada geese turn into a new kind? They changed, or adapted, to survive better in their new surroundings. The Hawaiian geese had to scramble over jagged lava rocks to find food. Those geese born with stronger legs and feet survived better than others. Their feet had claws and smaller webs. After thousands of years all the nenes were built for rock-climbing instead of swimming. In time even the markings on their feathers were no longer like those of Canada geese.

Since the nene geese didn't migrate over long distances any more, they didn't need large wing muscles and bones. Geese with smaller wings were able to survive. In late fall the nenes just flew down the side of the volcano to breed. In the summer the geese and their young went back up the mountain.

The crater was very wide, with many little cone-craters in it. At times one of the craters did erupt, spouting fire and streams of hot lava. The lava formed a new cone or flowed

down the mountain. Luckily the geese could fly to another part of the big mountain, so most of them were not harmed. The nenes multiplied into thousands of geese.

The birds had adapted to living on the island with the volcano. But about 2000 years ago life on the island began to change. From other islands in the Pacific, people came to Maui in big canoes and settled there.

Hundreds of years later, in the 1800's, ships carrying missionaries and whalers from Europe and America came to Maui. Some decided to stay and become farmers. They planted sugarcane and pineapple on the slopes of the volcano.

As the island became more settled, it got harder for the nene geese to live there. When they came down the mountain for the winter, the plants they usually ate were gone. Only tough, spiky sugarcane and pineapple plants grew in their place. Some of the settlers' goats ran wild and destroyed the plants higher up on the mountain.

Some people shot the nene geese for food. And free-roaming pigs, dogs and cats preyed on the nenes' young, called *goslings*.

Then man brought in the worst nene enemy of all — a fierce animal called the mongoose. Whaling ships that stopped at Maui often had rats on board. Some of the rats escaped. Before long, rats ran all over the island, eating the sugarcane. So the settlers turned loose mongooses to kill the rats. The mongooses killed only some of the rats, but they ate a lot of goose eggs and goslings.

By the early 1900's, hardly any wild nenes were left. Herbert Shipman, a rancher who lived on the island of Hawaii, was sad that the nenes were disappearing. Mr. Shipman kept a pair of nenes and their goslings safe on his ranch. After a few years he had a small flock of nenes.

Please turn the page



Sir Peter Scott, who ran a large bird refuge in England, asked Mr. Shipman if he could keep a few nene geese there. Then if anything happened to Mr. Shipman's nenes in Hawaii, there would still be some in England. Mr. Shipman sent three geese to England.

The refuge in the green English countryside was very different from the rough lava fields in Hawaii. But that didn't keep the nenes from nesting and raising goslings. After ten years the refuge had hundreds of nene geese.

Meanwhile Mr. Shipman had also given scientists in Hawaii some of his nene geese so they could raise more of them. But by then no nenes were left on the island of Maui.

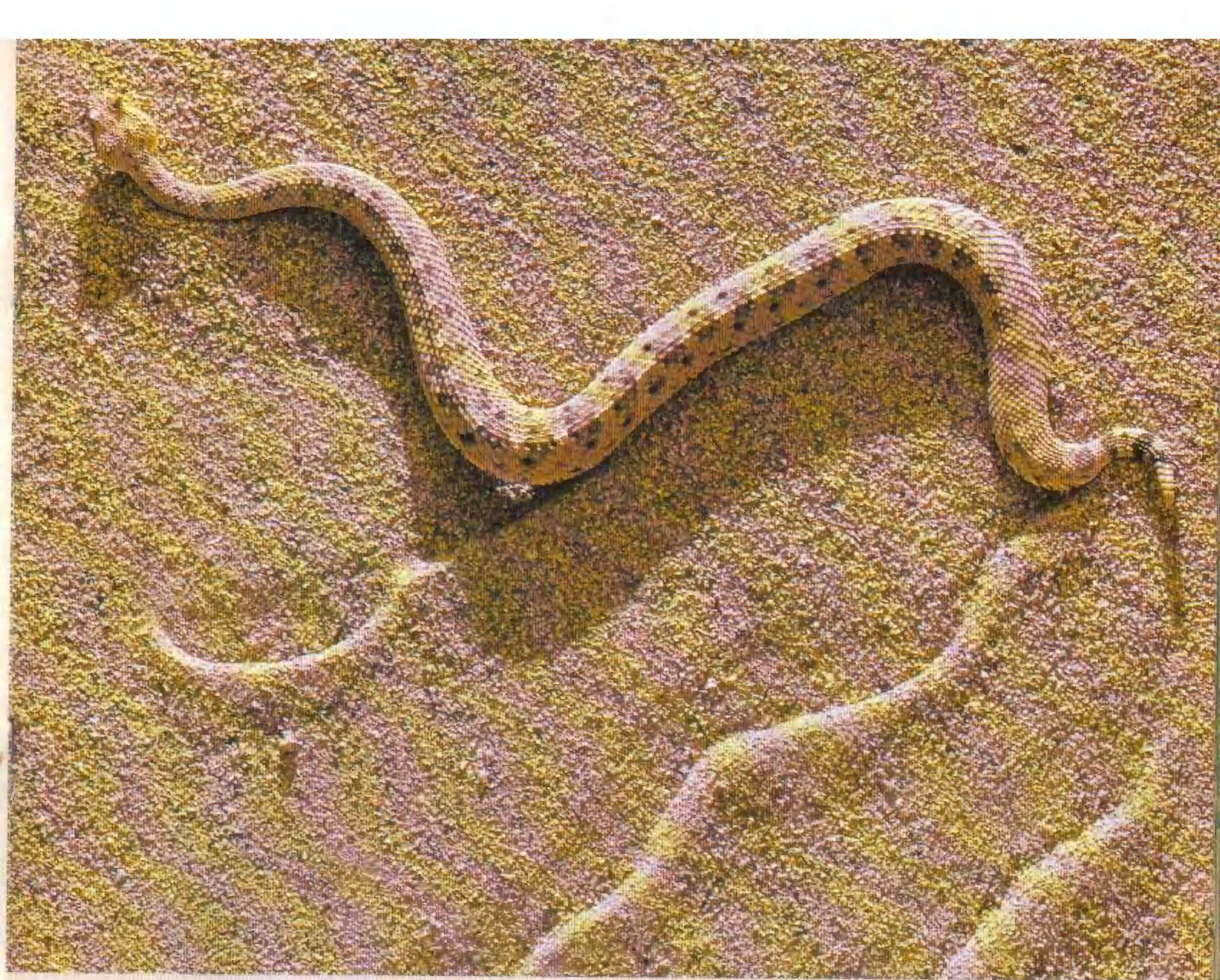
In the early 1960's scientists decided to send some nene geese back to the volcano on Maui to see whether they could live there again. Thirty geese were flown over from the refuge in England. At the Maui airport they were joined by five geese from the island of Hawaii. A truck took the geese up to the rim

of the volcano, which hadn't erupted for a long time.

Next, Boy Scouts carried the geese on a long, rough trail down the side of the crater. They unloaded the geese into a large pen where they could be protected while they got used to their surroundings. There were plenty of plants for the nenes to eat. Park rangers had cleared the area of mongooses, pigs, goats, dogs and cats that might harm the geese or any goslings they raised. After a while the geese could leave the pen and spread out in the crater. Soon they seemed to be at home again on Haleakela volcano.

Since 1911 it has been against the law to shoot nene geese. In fact these special geese are Hawaii's state bird. Besides the refuge at the crater on Maui, there are four other refuges on Hawaii where nenes are protected. Now if you visit Haleakela National Park on Maui, you can see hundreds of nene geese scrambling over the lava with their goslings.

The End



A baby rattler is born with just a button on the tip of its tail. Each time it sheds its skin (a few times a year), a new ring appears. But since rings often break off, even the oldest rattlers have only about eight.

The **sidewinder** (see photos on pages 26, 27) is one of the smallest of about 30 kinds of rattlesnake in North America. But it looks mean. Also called the "horned rattler," it has an

overgrown scale above each eye. These look like horns and work like eye shades. They're good to have in a world of glaring sun and blowing sand.

A sidewinder has a few more tricks for surviving in the hot southwestern deserts. With flips of its neck it can throw sand over itself. Half buried, the snake stays cooler. And what a great way to hide from enemies or wait for prey!

Another trick gives the sidewinder its name. Unlike other snakes, it moves facing sideways. (The snake above is crawling toward the top of the picture, not toward the corner.) The sidewinder throws loops of its body forward. Only two short sections touch the hot sand at a time. This helps keep the snake cool. And there's no faster way for a snake to move across soft sand.

Please turn the page

Photos by Joe McDonald



Copperhead

That forked tongue is to smell you, not to harm you. Like all poisonous snakes, the beautiful copperhead bites with its fangs.

Copperheads are not as poisonous as rattlers, and



they almost never kill anyone. But they sure are snakes to watch out for.

Always be careful in wild, rocky places in the East, where copperheads live. Their copper pattern hides them among dead leaves. So wear high, heavy boots and watch

where you step. Never put your hands where they may not be welcome. *Zap!* You could get a nasty bite.

Copperheads often hunt at night. Like rattlers, they are *pit vipers*. They use their heat-sensing pits to search for their prey.

A baby copperhead may stay hidden in leaves and still find plenty to eat. The tip of its tail is bright yellow. When it twitches, it looks like a wiggling worm. Some people believe this is a perfect lure for catching a hungry toad.

Please turn the page



Photos by Joe McDonald

Cottonmouth

One look at that wide open mouth tells you how this snake got its name. The cottonmouth's other name, water moccasin, tells you where it lives — in or near water. It is our only poisonous water snake, found only in the Southeast, the Mississippi Valley and Texas.

Like the harmless water snakes, it catches frogs and fish. But it also eats birds and mammals, finding them with its pits.

Some people confuse harmless water snakes with cottonmouths. Their markings may look alike, but the snakes don't act alike. If you surprise a harmless water snake close up, it will glide into the water and hide. If you surprise a cottonmouth close up, it may have a little surprise for you! It will throw back its head and open its mouth wide. That white skin inside should tell you clearly — *Dangerous snake! Stay back!*





Coral Snake

The poisonous snake with the boldest colors is also the shyest. If cornered, it lies still with its head under its body. But if touched, it may swing its head and bite.

The coral snake is not a pit viper, and its fangs are short. To deliver its deadly poison, it has to chew on its victim.

Coral snakes get their

name from their bright coral-red rings. Five harmless snakes, including the scarlet king snake, are look-alikes.

And some live in the Southeast and Texas where coral snakes also live. To tell them apart, try this saying about the order of their colors:

Red and black, friend of Jack.

Red and yellow, kill a fellow.

The End



Photos by James H. Robinson



BUTTERFLY

Butterfly, butterfly!
High in the sky you fly.
Butterfly, butterfly!
In the night out of sight
you quietly rest.
Butterfly, butterfly!
Here's the hunter with his net!
Fly away, fly away!

Chrissie Cummings, Age 9

THE CATERPILLAR

The caterpillar comes from an egg.
A caterpillar has more than one leg.
Some are green and some are brown,
And some are striped all around.
Then it goes into a case,
First its feet and then its face.
Out will come a butterfly,
And off it goes, into the sky.

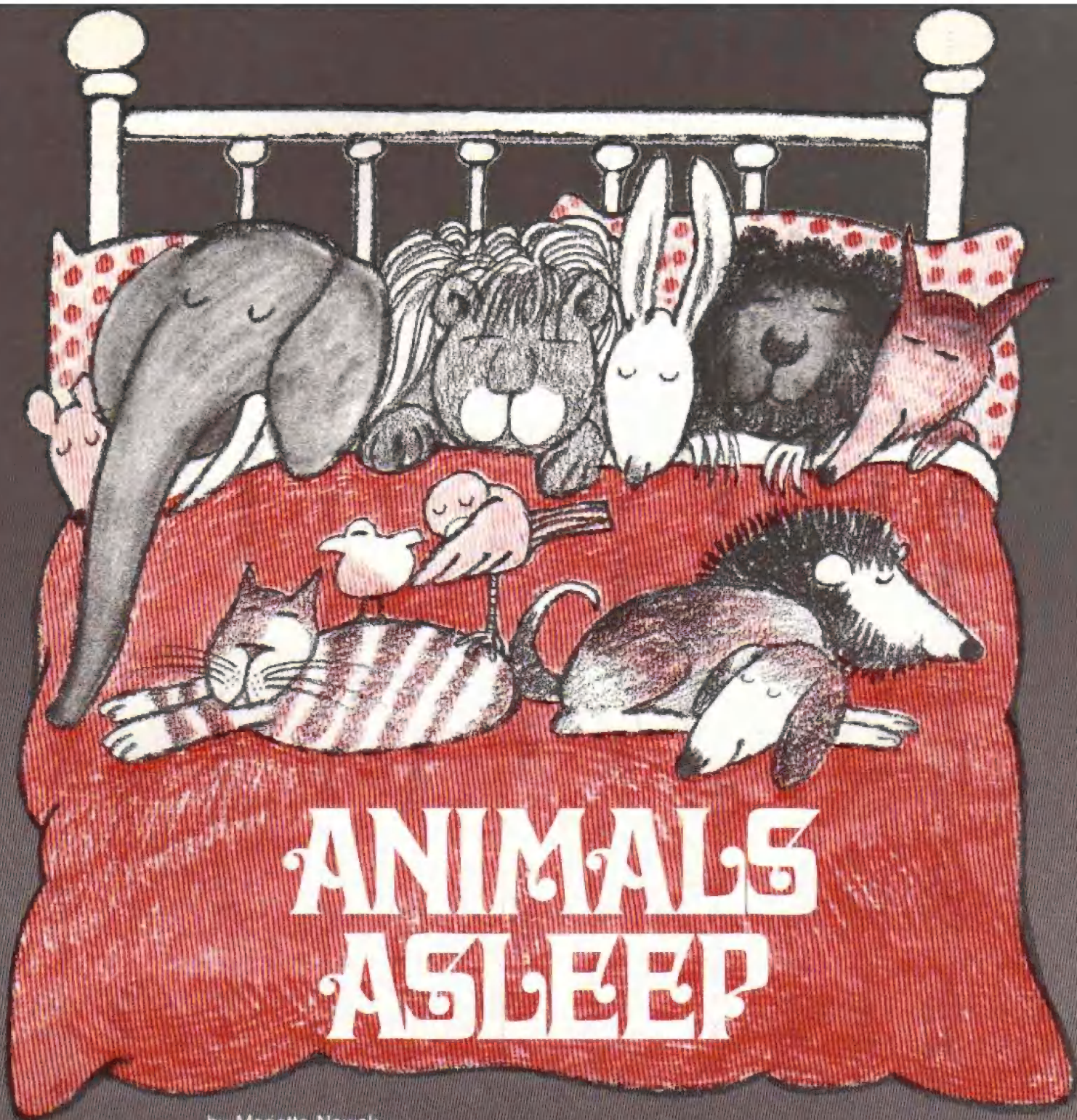
Duane Dungan, Age 11
Medford, OR

Whispery, whispery, on light wings—
Can't make the sound of a bird that sings.
Can't make the sound of the wind in the trees.
Can't make the sound of the buzzing of bees.
Fluttering, floating, passing by,
Who do you think it is? A butterfly!

Deborah Ontman, Age 9
Kansas City, MO

A little butterfly
flying through the sky
is all you would
expect in beauty.

Virginia Buchner, Age 9
San Antonio, TX



by Mariette Nowak

Each night you go to bed and sleep for many hours. Your breathing and heartbeat slow down, and you don't know what's going on around you: Your mind is filled off and on with dreams.

But what if you were a robin or a rabbit? Or an ant or an elephant? Would you sleep then? Would you dream?

Please turn the page



Most animals need to sleep or rest every day, just as you do. Among the mammals there are long sleepers and short sleepers. Cats, for example, may sleep up to 16 hours a day. They may fall asleep at any time, day or night.

There are other long sleepers too. Ground squirrels and hamsters sleep about 14 hours each day. Two longer sleepers are bats, which sleep 20 hours a day and opossums, which sleep 19. These animals pack a lot of living into the few hours they are awake.

Some of the short sleepers are animals which have hooves, such as donkeys and elephants. They can get along without sleep for a long time, sometimes even months, without harm. Usually, however, elephants and donkeys sleep about four hours each day. Rabbits and guinea pigs need to be so alert that they sleep very little. A rabbit will doze lightly on and off — up to 20 short naps in a single day.

Why are some animals short sleepers and others long sleepers? Most of the long sleepers are *predators* which hunt other animals for food. Cats, such as lions and tigers, are predators. Even *pet* cats hunt for mice and other small animals. Cats have few enemies. So usually they don't have to watch for other animals that want to eat them while they're asleep. Dogs also have little to watch out for at night. Like cats, they are long sleepers.

Most short sleepers, on the other hand, sleep in the open and must always be watching out for predators. Wild donkeys sleep in open grasslands. Rabbits often sleep aboveground, as do wild guinea pigs. They only take naps.

If you have a pet bird, you know that birds sleep too. Most sleep at night perched on tree branches. Their feet lock into place so they cannot fall. Then they tuck their beaks under their feathers until morning. Owls and a few other

birds sleep by day. Ducks can sleep on land or water. On land they sometimes sleep standing on one leg. In the water they may lazily paddle with one foot while they are asleep.

Many birds have "slumber parties." Quail roost on the ground in a circle with all their tails together. Goldeneye ducks sleep in tight, floating bunches on lakes and rivers on cold winter nights. Wrens and many other small birds huddle together in balls to sleep. This helps them keep warm.

Reptiles also sleep. But amphibians and fish sleep in a way that's very different from our own. They are slightly aware of what's going on around them. That's why some people say that they are resting and not really sleeping. Fish, except for a few sharks, don't have eyelids to close their eyes. They just lie quietly hidden among rocks or weeds. Divers have found big schools of perch resting on the bottom of lakes.

Insects don't really sleep either. But they can often be seen resting. At night butterflies hang head down on blades of grass with their wings tightly folded. Wasps and bees also rest in the grass. Ants huddle together in their nests. They lie down and fold their legs and feelers close to their bodies. When the ants become active again, they stretch their six legs and often shake them. They also open their mouths wide. It's almost as if they were yawning.

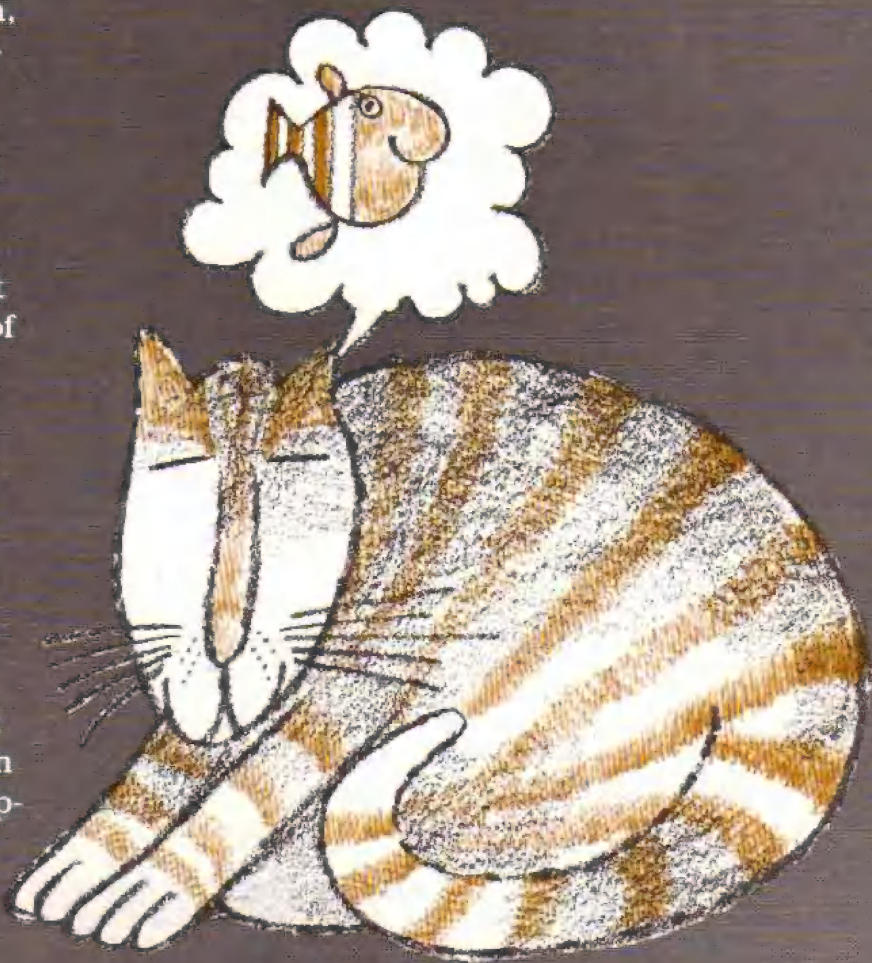
Insects and other animals that aren't true sleepers don't dream. And not even all true sleepers are dreamers. Most reptiles do not dream, and most birds dream only for short times. But all mammals dream.

The animal that sleeps and dreams most like us is the chimpanzee. This

should be no surprise, since the chimp is the closest relative to humans.

In one way, though, chimpanzees sleep very differently from the way we do. After sunset, a chimp will look for a good firm place in a tree, such as the fork of a branch. Then it bends down nearby leafy branches to make a nest. Sometimes, before settling down for the night, a chimp will pick a handful of leafy twigs to use as a pillow.

We humans, of course, sleep close to the ground, snug in our beds. And that's the way it should be — every creature, at night or by day, on land or in trees, eyes open or closed, resting or sleeping in its very own way. *The End*



WHO-O-O KNOWS ants?

I've been getting so many letters asking about ants that I feel as if I'm at a picnic. But I guess I shouldn't be surprised. After all, ants are pretty amazing!

Dear Wise Old Owl:

When our maple tree blew down it had bugs in it. They were black with a red middle section. They had wings. Were they termites or ants?

Vonda Borger
Snowshoe, PA

Flying ants and termites can look alike. Here's how to tell them apart:

Termites are usually pale insects with soft bodies. Ants have hard bodies and are darker than termites.

Termites have straight antennae (feelers). Ant antennae have a crook.

Both flying ants and termites have two pairs of wings. In termites the two pairs are about the same size. In ants the back pair of wings is smaller than the front pair.

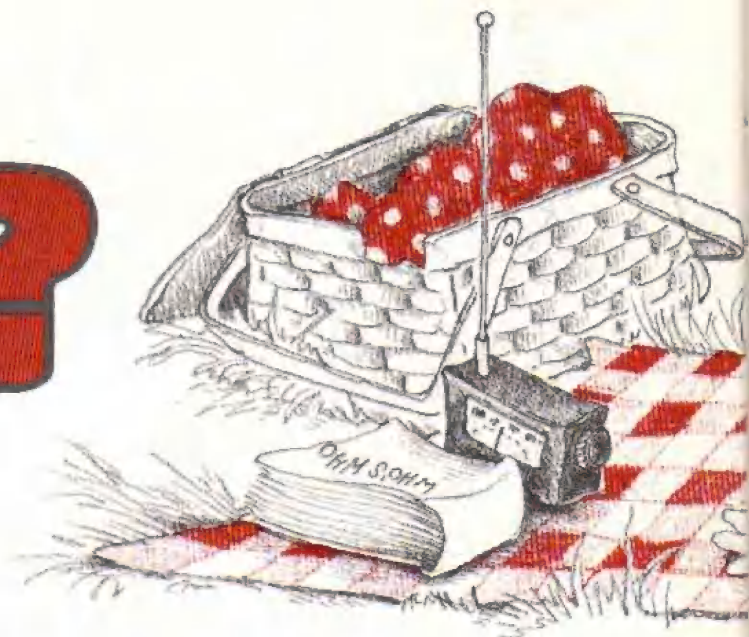
Like all insects, ants and termites have bodies that are divided into three parts — the head, thorax and abdomen. Ants are pinched in where the thorax and abdomen join. Ants have a thin "waist" and termites do not. Since you say that the insects you found had a red middle section, I'll bet they were ants.



Flying ant



Termite



I saw red ants attack black ants and carry the black ants' cocoons back to the red anthill. Why were they doing this?

David Dix, Age 9, Wausau, WI

Some kinds of ants raid the nests of other ants and carry the larvae and cocoons back to their own colonies. These captured ants grow up to work in their new colony as slaves.

This morning I saw a crow sitting on an anthill. It was picking up ants with its beak and putting them under its feathers. Why was it doing such a weird thing?

Reid Karr, Fort Collins, CO

The crow that you saw was *anting*. Many kinds of songbirds behave this way, but scientists don't know why.

Maybe the ants help the birds by eating lice and other pests that live among their feathers. Many ants' bodies contain a sharp-smelling liquid called *formic acid*. When a bird crushes an ant and puts it under its feathers, the formic acid may clean the feathers or kill small pests. Or perhaps anting just makes the birds feel good.

Come to think of it, anting does sound interesting. Maybe I'll try it tonight — instead of my usual bubble bath.



Drawing by Cyndy Szekeres

How does one ant know another ant from its own colony?

Eric Brown, Age 9½
Albuquerque, NM

Ants in each colony produce chemicals called *pheromones* (FER-uh-moans). These pheromones give each colony a special odor. When two ants meet, they touch and smell each other with their antennae. The pheromones tell them whether the other ant comes from the same colony or a different one.

Why is it that when you drop food, so many ants show up so fast? How did they know it was there?

Missy Haagen
Age 11, Nashville, TN

Ants are always out scouting for food. So no matter where you drop your candy bar, sooner or later an ant is likely to come across it. When an ant discovers food, it gets excited. As it scurries back to its nest, it leaves behind a chemical trail.

When it gets back to the nest, other ants smell the trail and follow it to the food. Once these new ants reach the food, they get excited too. So on their way back to the nest, they also leave chemical trails. Soon many

ants are hurrying along the trail to the food. In no time at all, your candy bar is covered with hungry ants!

How smart are ants?

Ellie Feinberg, Age 10

For insects, ants are quite intelligent. They can remember the way back to their nests. And they can learn to do mazes. Once an ant has found the right way through a maze, it can travel through it again and again without making any wrong turns.

But ants can't think the way you do. They can't *figure out* the best way to food. They just follow the chemical trail, even if it takes them on a long roundabout route. If you'd like to know more about how smart ants are, turn the page and read this month's Nature Club News.

Any insect that can do a maze is very smart — for an insect. But it's nowhere near as smart as you and me!

W.O.O.

Answers to puzzles on page 15: *Fun on Foot* — 1. snail; 2. crab; 3. squid; 4. centipede. *Hooves, Paws, Flippers* — Sea lion—F; reindeer—H; dolphin—F; mole—P; kangaroo—P; zebra—H; walrus—F; whale—F; lion—P; giraffe—H; bear—P; seal—F; antelope—H; opossum—P.

Nature Club News

ANT WATCHING

Ants here, ants there. Look around and you'll see ants crawling almost everywhere! That's just what a nature club in Reston, Virginia, did. They spent a summer day ant watching.

The Reston Rangers used magnifying glasses to scout sidewalks, walls and lawns. Soon they found one ant, then two — then hundreds! Red ants, black ants, even ants that were half red and half black.

A PICNIC FOR ANTS

After finding ants, the Rangers wanted to learn more about them. *What do ants eat?*

So the club members dabbed bits of food on walls and sidewalks. Some used flour and water paste; others used applesauce. Still other members sprinkled bread crumbs, seeds and tiny bits of marshmallow near the ants. They even tried to attract the ants with bits of colored cloth and a dead caterpillar.

What did the ants like best? Why not have your club members watch some ants and discover for yourselves?

What ants eat was only one of the things the Reston Rangers discovered. They looked carefully for ant trails — paths the ants make from food back to the nest.

With pieces of board they blocked some trails to see what would happen. They also scraped the trails so the ants' scents would be lost.

How do you think the ants solved the problems of finding their trails blocked? Go ant watching with your nature club. You may find the answers too.

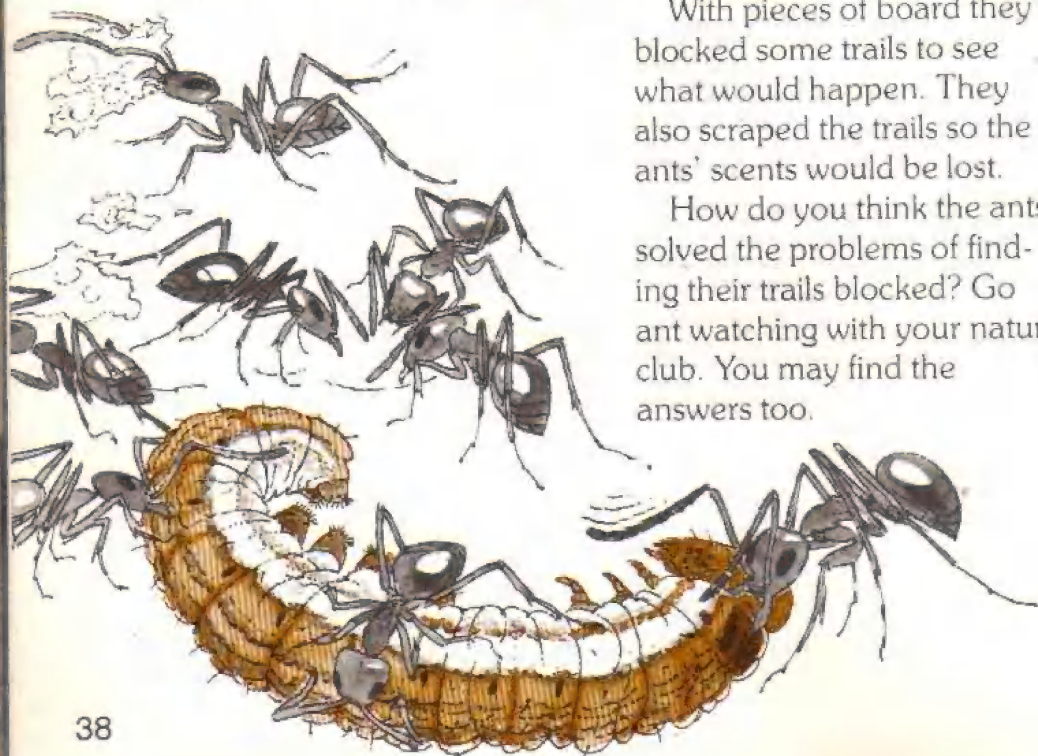


TOOTHPICK TRICK

Harvester ants in many parts of the West clear all the plants away from around the entrance to their nest. Sometimes they clear an area more than 30 feet (9 m) across! The harvester ants cut some of the plants — grasses and weeds — and collect the seeds for food.

The El Paso County Coyotes from the Solar Trails Center in Colorado Springs, Colorado, wanted to find out what would happen if they planted new "plants." The new "plants" were toothpicks.

These Rangers stuck a few toothpicks into the cleared area. Then a Ranger "called" the ants out of their underground home. How? He blew into the hole and, *presto*, ants came pouring out.



The ants saw the toothpicks and scurried over to them. A few ants climbed to the top of one toothpick. Their weight made the toothpick shaky. At the same time other ants bit the base of the toothpick. The Coyote Club members watched eagerly as the ants, working as a team, toppled toothpick after toothpick — just like tiny lumberjacks. Then they dragged the toothpicks away from the entrance to their nest. The ants, had cleared their area again.

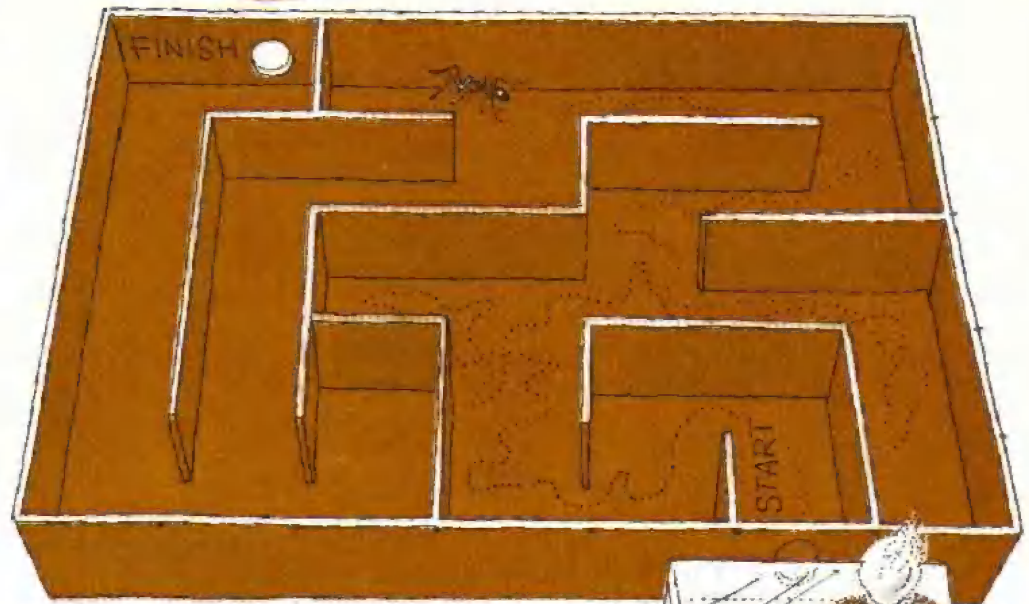
ANT APARTMENT

To study ants more closely, at your next nature club meeting make ant apartments. Bring small plastic boxes with clear lids. Your leader can help punch two holes in each lid. Stuff cotton into the holes. This lets air into the boxes, but the cotton plugs keep the ants from crawling out.

Your ants will need food, water and shelter. Put a little soil at one end of the box so the ants can hide. Each day drip a few drops of water into the box with an eyedropper. And put a tiny bit of food in the apartment about once a week. A drop or two of honey works nicely.



FOOD



MAKE A MAZE

To find out how ants learn, your club can make this ant maze. Use the lid of a cardboard box about 5 inches (12 cm) wide by 7 inches (18 cm) long and about 1 inch (2.5 cm) deep. Draw the paths of the maze, keeping them the same width. Cut cardboard strips to match the lines on the paths. The strips should be the same depth as the sides of the lid. Tape them in place or use white glue. The picture will give you ideas, but you can arrange your paths as you wish. Remember, make only one path that connects the opposite ends of the box. The other paths should be dead ends.

Stretch a piece of clear plastic wrap over the top of the maze so the ant can't crawl out.

NEST



Put a small dish of food at one end of the maze. Place an ant at the other end and see where it goes.

Run one ant at a time through the maze. Write down how long it takes the ant to find the food. Try the same ant several times to see whether it finds the food more quickly each time. Your club may be "a-mazed"!

Has your nature club been ant watching lately? Write and let us know what you've discovered. If your club hasn't watched ants, polish your magnifiers and hit the trail — the ant trail, that is!

The End

HOLLOW OAK BOOK NOOK



DISCOVER THE TREES by Jerry Cowle. Do you know what tree can help your toothache? Or which one has knees? Entertaining text and charming illustrations give you the answers to these and many other questions about the fascinating world of trees. 96 pages, 6¾" x 8½", ages 8-12.

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DRAW 50 DINOSAURS AND OTHER PREHISTORIC ANIMALS by Lee J. Ames. Easy step-by-step instructions show how to draw the fierce Tyrannosaurus, huge Brachiosaurus and 48 more dinosaurs that wandered the earth in ages long past in this wonderful book of playtime fun. 62 pages, 9" x 12½", all ages.

67207-2GG Non-members\$6.95
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DRAW 50 ANIMALS by Lee J. Ames. Step-by-step instructions show you how to draw ferocious lions, huge elephants, beautiful birds and many other animals. It's the perfect introduction to a fascinating pastime! 62 pages, 9" x 12½", all ages.

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THE POP-UP ANIMAL FAIR. Children will love these delightful and fanciful three-dimensional pop-up pictures that show "Two kangaroos making stews" and "Three wise owls sewing towels" and more in this colorful and fun-filled counting book. 7¾" x 10¾", all ages.

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A CHILD'S BOOK OF BIRDS by Kathleen N. Daly. Beautiful drawings—many in full-color—illustrate this small child's guide to the birds to be seen in garden, yard, field or wood. Here are familiar birds of all sizes and shapes, from the tiny hummingbird to soft silent owls. 44 pages 5½" x 8½", ages 3-7.

67270-2GG Non-members\$5.95
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DINOSAURS—A POP-UP BOOK. The mysterious and fascinating world of prehistoric beasts is pictured in striking and unusual three dimensional pop-up pictures that will entertain children as they learn about the creatures that lived on earth ages ago. 7¾" x 10¾", all ages.

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30700GG Ranger Rick Pillow\$5.00



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25609GG Wildlife Photo Portfolio (Set of 16) \$4.50



NWF WILDLIFE STAMP COLORING BOOK features Wildlife Conservation Stamps reproduced in line drawings for kids to color. Each 9" x 12" page includes a drawing, some interesting facts on the species pictured and a space to mount an actual wildlife stamp. (Sheet of 36 Wildlife Stamps included).

20088GG NWF Wildlife Stamp Coloring Book\$2.25

WEAR IT WITH PRIDE on your jeans, jackets, anywhere! The Ranger Rick Club emblem is in full color on a bright blue background. Made out of tough material, it won't tear or fade. And it shows that you care about wildlife. 3½" in diameter.

39569GG Ranger Rick Patch\$1.00





1

PICK THE REAL CARDINAL



2

**WHO'S
WHO?**



3



4

**PICK
THE REAL
BUMBLEBEE**

Please turn the page



5

PICK THE REAL WILDCAT

ANSWERS:

1 is a female cardinal. 2 is a male pyrrhuloxia (peer-uh-LOCK-see-uh). It lives in the southwestern United States as well as in Mexico. 4 is the bumblebee. 3 is a robber fly. By looking like a bumblebee, it may fool predators that might otherwise eat it. 6 is the European wildcat. It may be one of the ancestors of our pet cats, such as 5.



Swallowed By Conny

Photos by John Dommers



by Sean Reardon, Age 9

I always wondered what Jonah felt like when he was swallowed by a whale. Now I know!

The Connecticut Cetacean (seh-TAY-shun) Society decided to build the world's first life-size model of a sperm whale. (Whales, dolphins and porpoises are all *cetaceans*.) I was one of 130 volunteers who helped build the model. I was able to work on both the outside and inside of the whale, which we named *Conny*. The model is 60 feet (18 m) long and 20 feet (6 m) high. Someday the inside of *Conny* will become a mini-museum about whales.

People who knew how to work with cement showed us how to mix it and put it on the wood frame. The frame was covered with steel rods and heavy wire. We used 15 tons (13.5 metric tons) of cement! Some of it got onto me and my clothes. My mom didn't



mind, though. She was helping, too, as a nurse.

I liked working inside Conny better. It was kind of hard sometimes. The people working on the outside of Conny squished the cement through the wire. Often it plopped right on top of us! But it didn't take long for us to learn to work as a team.

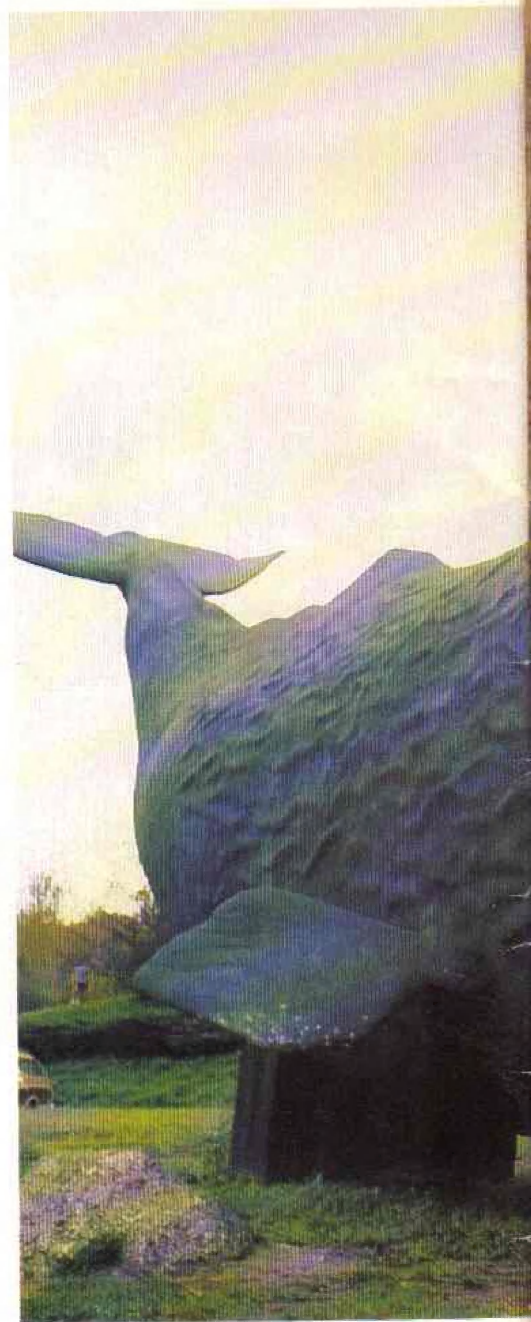
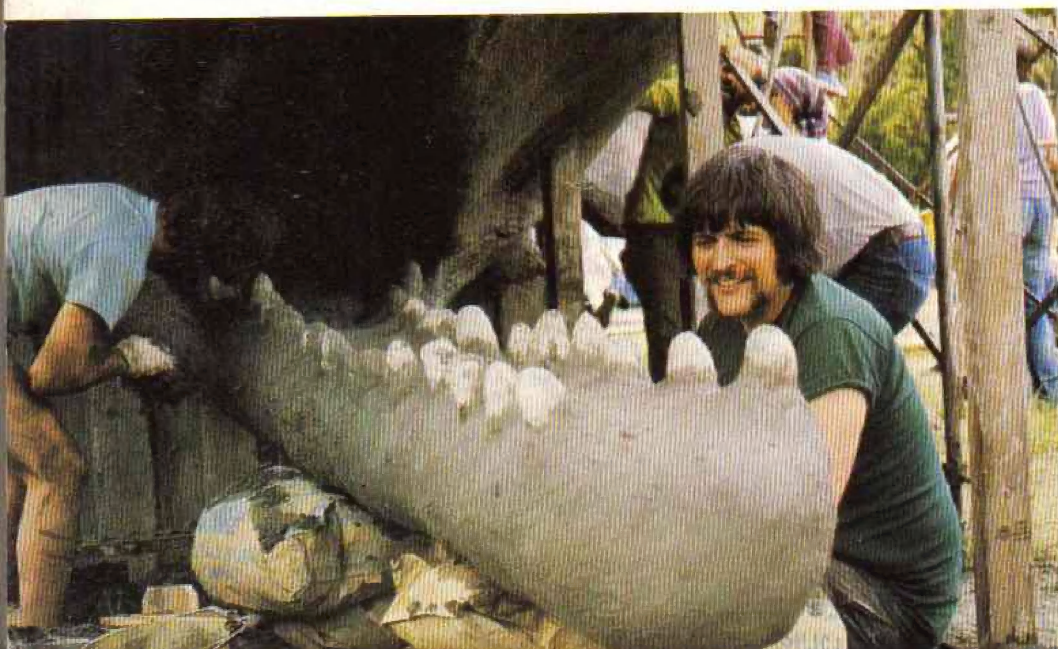
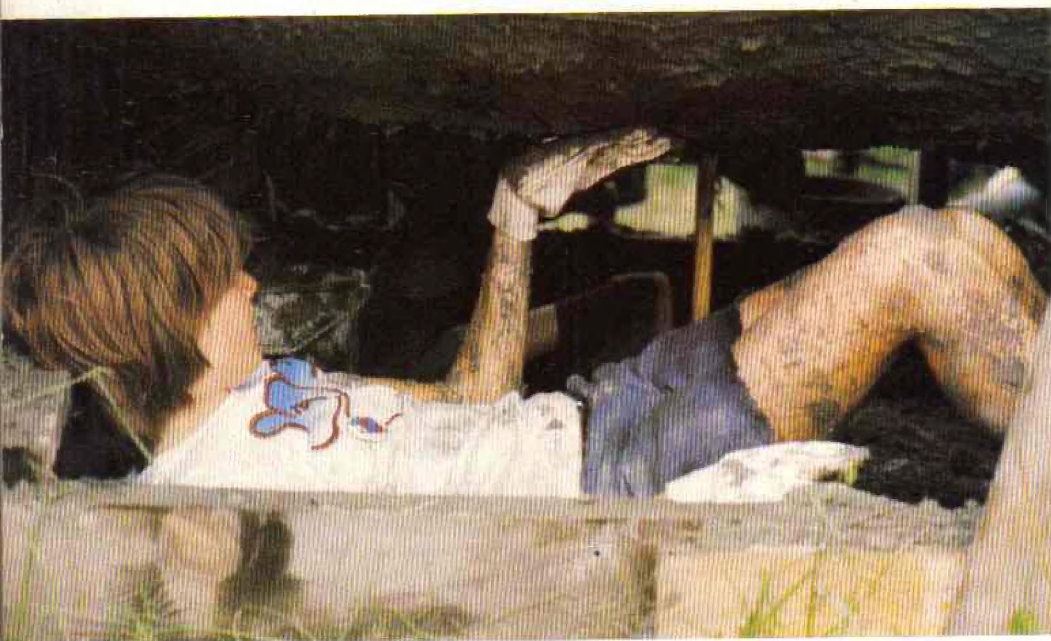
I also liked working on top of the whale. It was a little dangerous to cover the flukes with cement, so we left this job for bigger kids.

Please turn the page



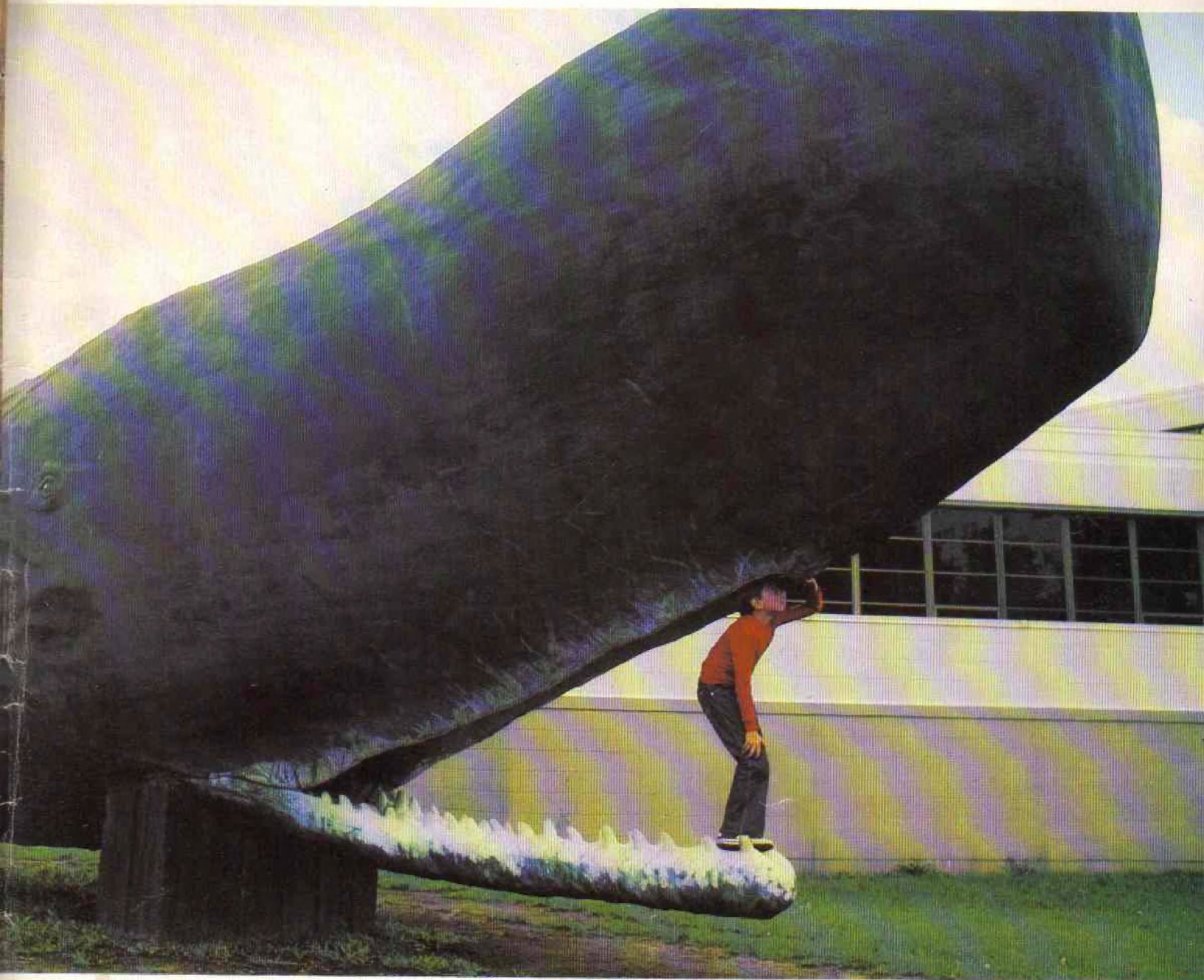
Getting cement on the whale's belly was hard. Some of my friends had to squeeze underneath it. Then they had to work in uncomfortable positions. Whaling songs were played over a loudspeaker. But those working underneath the whale couldn't sing because of gobs of cement falling on their faces!

We made everything on the whale as accurate as possible, including the teeth. The sperm whale has up to two dozen teeth the size of cucumbers on each side of its lower jaw. The teeth don't chew like ours. The whale uses them to catch and hold giant squid and cuttlefish. My friend Don Sineti (bottom photo).



President of the Connecticut Cetacean Society, made sure the teeth were just right.

We started work on Conny early one Saturday morning. I worked the whole day until suppertime. The rest of the people



worked almost all night. They were finished around 4:00 Sunday morning! Then they covered the whale with a huge plastic bag. For three days two steam generators kept the inside of the plastic bag filled with hot steam. This

baked and cured the cement so it would be really strong.

When the plastic bag came off, I couldn't believe my eyes. Conny was all finished. She looked neat!

I hope everyone who visits Conny at the West Hartford

Children's Museum will want to learn more about these beautiful mammals of the sea. The whale is the official state animal of Connecticut. We all worked on Conny to show we love whales and want to save them. *The End*



Where are you going on vacation this summer?
You could visit this land iguana on the
Galapagos Islands. Or how about a trip to
the Everglades to see an anhinga like the
one preening on the front cover?